Space Weather Forecast

Issued on Monday, 08 November 2021 at 00:27 Local

This forecast provides a four day assessment of space weather events. The probabilities stated below are for reaching or exceeding the given levels. For more information about space weather impacts please see the Met Office Space Weather Scales https://www.metoffice.gov.uk/weather/learn-about/space-weather/uk-scales

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Space Weather Forecast Headline: No significant activity.

Analysis of Space Weather Activity over past 24 hours

Solar Activity: Solar Activity was Very Low with x-ray flares remaining at background level only. There are three sunspot containing regions on the Earth-facing Sun, although they are all relatively small and simple with no notable flare activity currently observed. No Earth-directed coronal mass ejections (CMEs) have been observed.

Solar Wind / Geomagnetic Activity: The solar wind speed declined from elevated levels (540km/s) to be slightly elevated (440 km/s). The strength of the magnetic field carried with the wind remain weak, with no significant deflections in the north-south component. Geomagnetic Activity was Active from 07/0000-0300, but declined to be Quiet thereafter.

Energetic Particles / Solar Radiation: The count rate of energetic particles (high energy protons) is at background levels with no solar radiation storms observed.

Four-Day Space Weather Forecast Summary

Solar Activity: Solar activity is forecast to be Very Low through the forecast period with a chance of rising to Low from any common-class flares.

Solar Wind / Geomagnetic Activity: There are no Earth-directed CMEs, Current slightly elevated solar winds may also see some limited enhancement for a time day 1 (8th) from the arrival of some faster solar winds from a coronal hole. Otherwise solar winds are expected to ease towards background. Geomagnetic activity is forecast to be Quiet with a chance Unsettled intervals, and the potential for Active intervals, mainly day 1 (8th) or day 4 (11th).

Energetic Particles / Solar Radiation: The count rate of energetic particles (high energy protons) is expected to be at background levels.

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Met Office Space Weather Forecast

Geomagnetic Storms:

Geo-Magnetic Storm Probability (Exceedance)	Level	Past 24 Hours (Yes/No)	Day 1 (00-24 UTC) (%)	Day 2 (00-24 UTC) (%)	Day 3 (00-24 UTC) (%)	Day 4 (00-24 UTC) (%)
Minor or Moderate	G1 to G2	No	10	1	1	5
Strong	G3	No	1	1	1	1
Severe	G4	No	1	1	1	1
Extreme	G5	No	1	1	1	1

Radio Blackouts - X Ray Flares:

X Ray Flares Probability	Level	Past 24 Hours (Yes/No)	Day 1 (00-24 UTC) (%)	Day 2 (00-24 UTC) (%)	Day 3 (00-24 UTC) (%)	Day 4 (00-24 UTC) (%)
Active	R1-R2 M Class	No	5	5	5	5
Very Active	R3 to R5 X	No	1	1	1	1

Solar Radiation Storms - (High Energy Protons):

Radiation Storms Probability (Exceedance)	Level (cm^{-2} sr^{-1} s^{-1})	Past 24 Hours (Yes/No)	Day 1 (00-24 UTC) (%)	Day 2 (00-24 UTC) (%)	Day 3 (00-24 UTC) (%)	Day 4 (00-24 UTC) (%)
Active	≥ S1	No	1	1	1	1
Very Active	≥ S3 *	No	1	1	1	1

* S3 ≥ 10 MeV ≥ 1000 pfu and / or ≥ 50 MeV ≥ 10 pfu. (pfu = $cm^{-2}sr^{-1}s^{-1}$)

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